

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/Ala Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012658**Date Inspected:** 13-Mar-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** see below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower and OBG Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA Inspector) George Goulet was present during the times noted above for observations relative to the work being performed.

Bay 11

This QA Inspector randomly observed the following work in progress in Bay 11:

SMAW welding of weld joint WSD1-TL5-4B/F-37A located inside PCMK west tower, lift 5, skins D/E corner. Welders were identified as 040614, 040690. ZPMC QC was identified as CWI An Qingxiang (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC Li Jun, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-3211-TC-U4b-1. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Luo Lai Quan.

SMAW welding of weld joint WSD1-TL5-4B/F-2A located inside PCMK west tower, lift 5, skins C/D corner. Welder was identified as 040655. ZPMC QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC Li Jun, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-3212-TC-U4b-1. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Luo Lai Quan.

SMAW welding of weld joint WSD1-TL5-4B/F-38B located inside PCMK west tower, lift 5, skins C/D corner. Welders were identified as 041271, 040667. ZPMC QC was identified as QC1. Assisting QC1 at this location

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and appearing to be monitoring the welding and recording data was ZPMC Li Jun, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-3211-TC-U4b-1. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Luo Lai Quan.

### Bay 10

This QA Inspector randomly observed the following work in progress in Bay 10:

SMAW welding of weld joints NSTL4-3B/L-49, 53 located inside PCMK north tower, lift 4, skins B/C corner. Welder was identified as 057186. ZPMC QC was identified as CWI Du Zhi Qun (QC2). The welding variables recorded by QC2 appeared to comply with WPS-B-P-2311-TC-P4 for weld 49 at skin B and WPS-B-P-2312-TC-P4 for weld 53 at skin C.

### Heavy Dock

This QA Inspector randomly observed the following work in progress on the Heavy Dock:

FCAW welding of weld joint SSD1-SA18-22 located outside PCMK south tower, lift 1 base, skin B, shear plate stiffener to connection plate. Welder was identified as 054069. ZPMC QC was identified as CWI You Qi Guo (QC3). Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC He Gen, who was not a CWI. The welding variables recorded by QC3's assistant appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations were ABF Representatives Kong Xian Hui and Kang Yi.

FCAW welding of weld joint NSD1-SA33D/F-10 located outside PCMK north tower, lift 1 base, skin A, shear plate stiffener to connection plate. Welder was identified as 050041. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC He Gen, who was not a CWI. The welding variables recorded by QC3's assistant appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations were ABF Representatives Kong Xian Hui and Kang Yi.

FCAW welding of weld joint NSD1-SA76F/H-51 located outside PCMK north tower, lift 1 base, skin E, shear plate stiffener to connection plate. Welder was identified as 040533. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC He Gen, who was not a CWI. The welding variables recorded by QC3's assistant appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations were ABF Representatives Kong Xian Hui and Kang Yi.

FCAW welding of weld joint NSD1-SA76F/H-40 located outside PCMK north tower, lift 1 base, skin E, shear plate stiffener to connection plate. Welder was identified as 053869. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC He Gen, who was not a CWI. The welding variables recorded by QC3's assistant appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations were ABF Representatives Kong Xian Hui and Kang Yi.

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FCAW welding of weld joint ESD1-SA233-20 located outside PCMK east tower, lift 1 base, skin B, shear plate stiffener to connection plate. Welder was identified as 068206. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC He Gen, who was not a CWI. The welding variables recorded by QC3's assistant appeared to comply with WPS-B-T-2333-TC-P4-F.

Also present at this location and appearing to be monitoring the welding related operations were ABF Representatives Kong Xian Hui and Kang Yi.

FCAW welding of weld joint ESD1-SA233-27 located outside PCMK east tower, lift 1 base, skin B, shear plate stiffener to connection plate. Welder was identified as 066484. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC He Gen, who was not a CWI. The welding variables recorded by QC3's assistant appeared to comply with WPS-B-T-2333-TC-P4-F.

Also present at this location and appearing to be monitoring the welding related operations were ABF Representatives Kong Xian Hui and Kang Yi.

FCAW welding of weld joint ESD1-SA233-11 located outside PCMK east tower, lift 1 base, skin B, shear plate stiffener to connection plate. Welder was identified as 066481. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC He Gen, who was not a CWI. The welding variables recorded by QC3's assistant appeared to comply with WPS-B-T-2333-TC-P4-F.

Also present at this location and appearing to be monitoring the welding related operations were ABF Representatives Kong Xian Hui and Kang Yi.

FCAW welding of weld joint WSD1-SA653D/F-9 located outside PCMK west tower, lift 1 base, skin A, shear plate stiffener to connection plate. Welder was identified as 070022. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC He Gen, who was not a CWI. The welding variables recorded by QC3's assistant appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations were ABF Representatives Kong Xian Hui and Kang Yi.

FCAW welding of weld joint WSD1-SA279-19 located outside PCMK west tower, lift 1 base, skin B, shear plate stiffener to connection plate. Welder was identified as 068918. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC He Gen, who was not a CWI. The welding variables recorded by QC3's assistant appeared to comply with WPS-B-T-2333-TC-P4-F.

Also present at this location and appearing to be monitoring the welding related operations were ABF Representatives Kong Xian Hui and Kang Yi.

FCAW welding of weld joint WSD1-SA279-25 located outside PCMK west tower, lift 1 base, skin B, shear plate stiffener to connection plate. Welder was identified as 068919. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC He Gen, who was not a CWI. The welding variables recorded by QC3's assistant appeared to comply with WPS-B-T-2333-TC-P4-F.

Also present at this location and appearing to be monitoring the welding related operations were ABF Representatives Kong Xian Hui and Kang Yi.

The tower access elevator was not manned after 2115 hours and it appeared that no work was being performed at the lift1/ lift 2 joints of either of the towers.

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OBG segments 5E, 5W, and CB4 were located near the end of the heavy dock. No work was observed being performed on CB4. However, the following was randomly observed at 5E and 5W:

ZPMC workers were performing match drilling on OBG segment 5BW through previously drilled holes in the bottom plate of the FL3 section and into the bottom plates of segment 5BW.

ZPMC workers were performing what appeared to be final tightening of bolt sets on OBG segment 5BE, bottom plate of the FL3 section to the FL3 transverse bulkhead using an air impact wrench. The bolt sets had been marked to appear to be snug tightened prior to using the air impact wrench.

Other work was being performed that appeared to be preparations for moving OBG segments 5E and 5W onto the ship tied to the dock adjacent to the segments. No ZPMC QC personnel appeared to be monitoring any of the work on the heavy dock in the area of the OBG segments.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

No significant conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Skyler Guest, 150-0042-2360, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Goulet,George	Quality Assurance Inspector
<b>Reviewed By:</b>	Dawson,Paul	QA Reviewer

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